

## ABSTRACT

MASS SPECTROMETER

5 A mass spectrometer is disclosed wherein the  
experimentally determined mass to charge ratios of ions  
are reported together with an error band for each mass  
to charge ratio determination. The error band may, for  
example, reflect a 95% probability or confidence that  
the real, true, actual or accepted mass to charge ratio  
10 of the ion lies within the error band. By accurately  
determining the error band the possible candidate ions  
in a database can be accurately restricted whilst also  
guarding against over restriction.

15